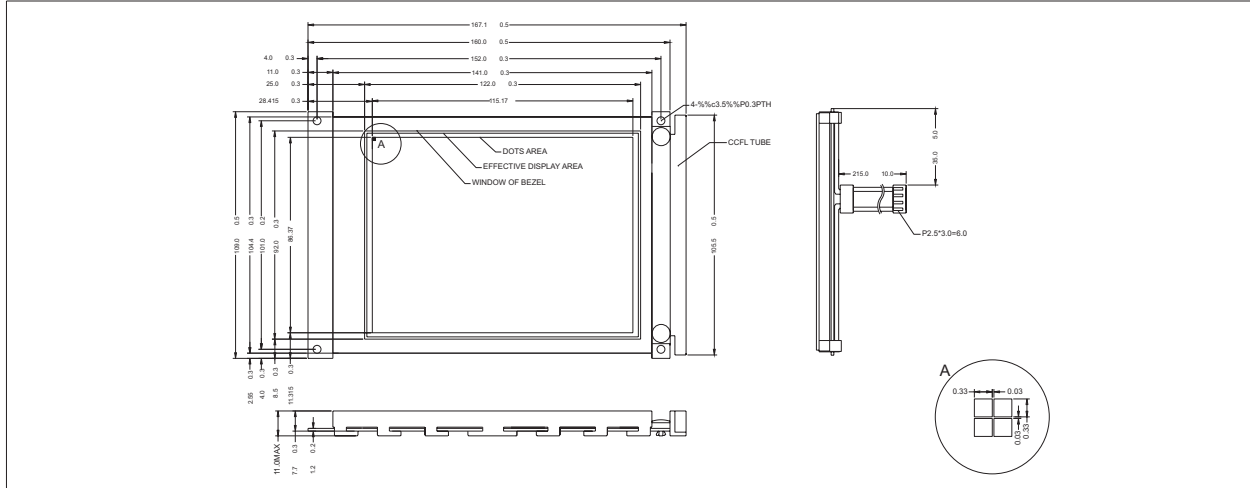


STANDARD GRAPHIC MODULES

YMS320240-05

320x240DOTS
1/240DUTY, 1/13BIAS

1 EXTERNAL DIMENSION AND DISPLAY PATTERN



2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size(W*H*T)	167.1 109.0 11.0	mm
Viewing Area(W*H)	122.0 92.0	mm
Number of Dots	320 240 with Cursor	mm
Dot Pitch (W*H)	0.33 0.33	mm
Dot Size (W*H)	0.36 0.36	mm

3 PIN CONNECTIONS

CN1/CN2/CN4:

PIN No.	SYMBOL	FUNCTION
1-4	DB0-DB3	Data Bit
5	/DISPOFF	H: Display on L: Display off
6	FRAME	Indicates the beginning of each display cycle
7	NC	No signal
8	LOAD	Data latch pulse
9	CP	Data shift clock pulse
10	Vdd	Supply Voltage for Logic and LCD(+)
11	VSS	Ground
12	VEE	Supply voltage for LCD(-)
13	V0	Operating voltage for LCD (variable)
14	FGND	Frame ground

CN3:

PIN No.	SYMBOL	FUNCTION
1	FRAME	Indicates the beginning of each display cycle
2	NC	No signal
3	LOAD	Data latch pulse
4	CP	Data shift clock pulse
5	/DISPOFF	H: Display on L: Display off
6-9	DB0-DB3	Data Bit
10	Vdd	Supply Voltage for Logic and LCD(+)
11	VSS	Ground
12	VEE	Supply voltage for LCD(-)
13	V0	Operating voltage for LCD (variable)
14	FGND	Frame ground

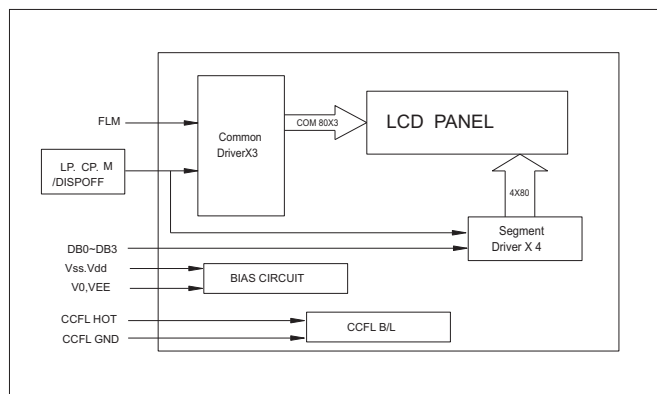
4 ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Supply Voltage Logic	VDD-VSS	-0.3	7.0	V
Supply Voltage Driver	VDD-VEE	-0.3	30.0	V
Intut Voltage	VIN	-0.3	Vdd+0.3	V
Operating Temp	See page 9			
Storage Temp	See page 9			

5 ELECTRICAL CHARACTERISTICS(Ta=25 °C)

ITEM	SYMBOL	CONDITION	SPEC. VALUE			UNIT
			MIN.	TYP.	MAX.	
Supply Voltage (Logic)	$V_{DD}-V_{SS}$		4.5	5.0	5.5	V
Supply Current (Logic)	I_{DD}	$V_{DD}=5V$	-	8.7	13.0	mA
Input Voltage	HIGH	V_{IH}	$0.5V_{DD}$	-	V_{DD}	V
	LOW	V_{IL}	V_{DD}	-	0.8	V
Output Voltage	HIGH	V_{OH}	2.4	-	$0.2V_{DD}$	V
	LOW	V_{OL}	-	-	-	V
LCD Operating Voltage	$V_{DD}-V_{EE}$	$V_{DD}=5V$ $T_a=25^\circ C$	-	22.0	-	V
Supply Voltage LCD Drive	I_{EE}		-	4.5	0.3	mA

6 BLOCK DIAGRAM



7 BACKLIGHTING CHARACTERISTICS(Ta=25 °C)

LED

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIX
Supply Voltage	V_f			500	600	V
Power Consumption	F_{osc}			55		Hz
Luminous	I_v			500		cd/m ²